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DEVELOPMENT OF THE PLANTAIN-BASED CULTURE OF THE NYAKYUSA OF SOUTHERN TANZANIA

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ABSTRACT The Nyakyusa constitute an ethnic group in southern Tanzania who are known as the "banana-eaters." This paper describes and analyzes the plantain-based farming culture of the Nyakyusa from socio-historical, ethnobotanical, and ecological viewpoints, focusing on utilization, management skills, and local varieties. The Nyakyusa have built a close relationship with the crop over hundreds of years. In contrast to other plantain growers in the forest environments of Central Africa, the Nyakyusa create home gardens. In home-garden farming, a miniature forest is created for each family unit, requiring more intensive care than the slash-and-burn agriculture used in natural forest environments. The Nyakyusa have developed cultivation skills, tools, vocabulary, and varietal diversity in relation to the plants, and have also created symbolic meanings for the plants that are related to prosperity, the idea of the sacred, and gender values. Such symbolization may have worked as a social tool to protect this unique crop by conferring multiple meanings upon it. In other words, plantain probably played a key role in consolidating the development of the Nyakyusa rural community.

Key Words: Nyakyusa; Plantain; *Musa* spp.; Home garden; Cultural importance.

INTRODUCTION

Banana (*Musa* spp.) is a perennial herbaceous crop that originated in Southeast Asia, and is derived from the wild species *Musa acuminata* and *M. balbisiana.* These diploid species have been given the designations AA and BB, respectively, where A represents an *acuminata* genome and B a *balbisiana* genome. Through a long process of hybridization and backcrossing, cultivated bananas have diversified into diploids, triploids, and tetraploids of these two genomes, as well as into hybrids of the different types. The terms banana and plantain are confused in general use, as the definition of plantain varies around the world (Rossel, 1998). However, taxonomically, plantains are varieties belonging to a subgroup of triploid hybrids (AAB) (Tezenas du Montcel, 1987; Stover & Simmonds, 1987). I follow this taxonomic definition in this report.

In Tanzania, three ethnic groups are known as the banana-eaters: the Chagga in the northern part of the country, the Haya in the northwestern part, and the Nyakyusa in the southern part. Among these groups, only the Nyakyusa live on plantains (AAB); the other two groups intensively cultivate a number of other varieties of cooking bananas (AAA), known collectively as East African Highland bananas (Maruo, 2002). The main foods of almost all of the various small ethnic groups in the southern part of Tanzania are crops such as maize and wheat. Therefore, the Nyakyusa have developed a unique relationship with plan-

tain in the region. On this continent, only peoples in the humid lowland zones of Central to West Africa use plantain as an important source of starch.

It is probable that the Nyakyusa, a Bantu cultivator group, first settled in the current homeland between 1550 and 1650, based on carbon-dating evidence (Kalinga, 1985). The languages closest to that of the Nyakyusa are found around the Zambian border. Several social studies have examined the Nyakyusa people (Gulliver, 1958; Mwalilino, 1994; Gabbert, 2001; Willis, 2001). The works of Wilson, which have described the unique social system of the Nyakyusa, built around the age-village, have received some anthropological attention (Wilson, 1936; Wilson, 1951). However, information on their livelihood systems is scarce, except for a number of ecological studies (Kurita, 1993; Mwamfupe, 1998).

This paper describes and analyzes the plantain-based farming culture of the Nyakyusa from socio-historical, ethnobotanical, and ecological viewpoints. Special focus is placed on the utilization of, and management skills related to, plantain, as well as on the local varieties of plantain, comparing them with those of the Haya banana growers.

RESEARCH AREA AND PEOPLE

The Nyakyusa homeland (Unyakyusa) stretches across the districts of Rungwe and Kyela in Mbeya Region in Tanzania (Fig. 1), although some of the Nyakyusa live around the town of Mbeya and the south bank of the Songwe River on the Malawi side, where the closely related group, the Nkonde,

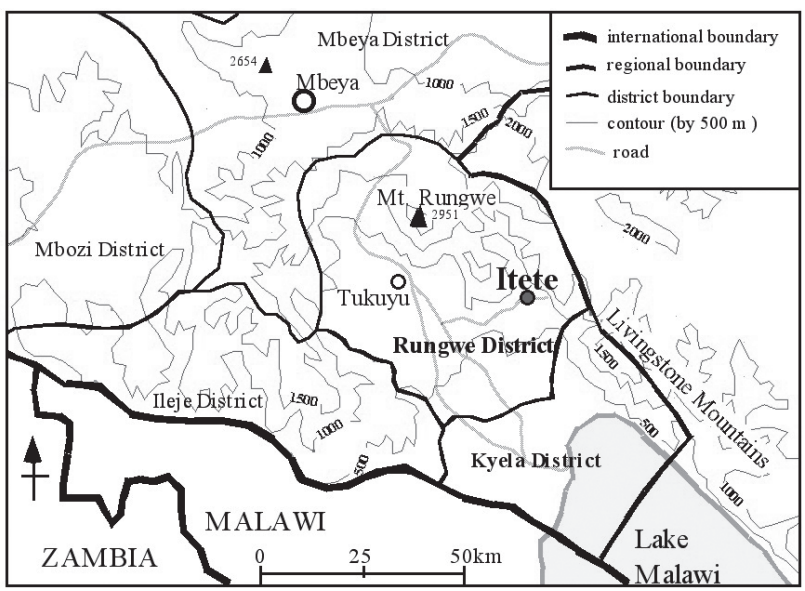

Fig. 1. Map of the research area

has settled. Located at the south end of the Great Rift Valley, Unyakyusa is surrounded by natural barriers: Mount Rungwe to the north, the Livingstone Mountains to the east, the Songwe River to the south, and the Ndali hills to the west. The Nyakyusa reside 500–2,000 m above sea level, with farming patterns varying with the different zones. In the midland zone above 600–700 m in altitude, they grow large amounts of plantain and banana, while rice is the major food crop cultivated in the lowland zone near Lake Malawi, with irrigation, and Irish potato and maize are cultivated in the highland zone near Mount Rungwe. The total population of the Nyakyusa was estimated as 750,000 in 1992 (Grimes, 1996).

The survey was conducted in Kabembe Village, Itete Ward, Rungwe District, Mbeya Region (Fig. 2). The village is located about 30 km east of Tukuyu, the district capital. The landscape is hilly and undulating in and around the village. The altitude ranges from about 800–1,000 m. The soils in the district are generally well-drained and of high to medium fertility, varying from volcanic soils (sandy loam) to more weathered soils. The natural vegetation in the district, although mostly depleted, varies from upper montane forest in the higher elevations to wet woodland (called *Miombo*) in the lower elevations (McKone, 1995; Gonza & Moshi, 2002). The area enjoys a temperate climate and relatively abundant rainfall. The mean temperature is between 15–25°C (Fig. 3), tending

Fig. 2. Landscape of the research area, Itete, Mbeya Region, Tanzania

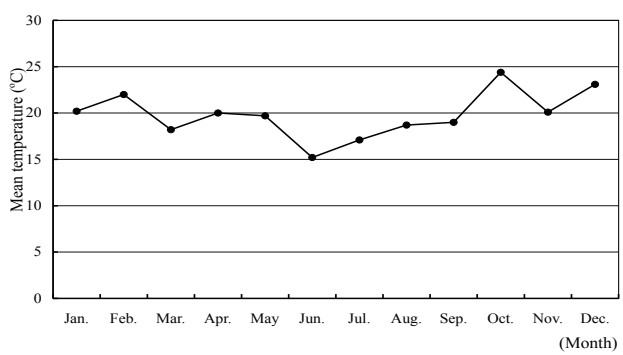

Fig. 3. Change of mean monthly temperature at Itete in 2000

Table 1. Population data of Itete Ward (Source from 1999 Ward Office Record)

Village	No. of Subvillage	Total Area (km^2)	Population			No. of Households	Pop. Density (persons/km^2)
			Male	Female	Total		
Kabembe	8	73	1361	1598	2959	711	40.5
Busoka	6	65	1191	1348	2539	550	39.1
Kibole	5	35	768	768	1536	345	43.9
Kilugu	6	26	451	490	941	207	36.2
Total	25	199	3771	4204	7975	1813	40.1

to be lower during the dry season, from June to October, and higher during the rainy season, from November to May. As much as 2,511 mm of rain falls per year at Tukuyu, with monthly rainfall of about 200 mm or more throughout the rainy season (Kurita, 1993). As it is located centrally in the ward, Kabembe Village has a Lutheran church with an attached hospital, as well as electricity in the village center. According to the ward office record of 1999, the population of the village was 2,959, and the density was estimated to be 40.1 persons/km^2 (Table 1). Under the influence of Lutheran missionaries, Protestants constitute the majority of the population, followed by Muslims.

AGRICULTURAL SYSTEM

I. Land Tenure and the *Nyumba Kumi* System

The basic unit of land holding by the Nyakyusa, the *kaaja* ('my dwelling'), is the space where each household settles and cultivates a home garden (Fig. 4). As farmland, the *kaaja* can be considered a plantain-based home garden. Border trees such as *kapombo* (*Euphorbia* spp.) are often planted on the edges of gardens. In another type of farmland, called the *ngunda* or *kyalo,* the

Fig. 4. The Nyakyusa home garden, '*kaaja*'

Nyakyusa cultivate annual or biennial crops. The current land tenure can be roughly classified into three types: clan holdings, village holdings, and individual holdings. In a detailed survey of the land usage, including other types of fields, Kurita (1993) reported that in the 1980s many fields were obtained without charge, mainly from kinsman or the village, and individual acquisitions by purchase were rare. When a *kaaja* is transferred from a father to sons, the land is divided evenly among the sons. In Nyakyusa villages, it is not uncommon that an unmarried son acquires a portion of his father's land and builds his own house. In the *ngunda* or *kyalo,* sons can cultivate the father's fields by borrowing them while the father is alive. After the death of the father, the first-born son inherits the fields, and then in many cases distributes them equally among his brothers.

Land held by the village is under the control of cell groups called *nyumba kumi* ('ten houses' in Swahili), a cooperative unit that consists of about 30 households. This system was promoted in Tanzania after the independence (of Tanganyika) in 1961 under the villagization policy, and was introduced to Nyakyusa society together with a new administrative system to replace the conventional chieftainship system. Each sub-village (*kitongoji*, the smallest administrative unit in Tanzania) constitutes several *nyumba kumi* groups. For example, five cell groups are found in Kitima, one of the eight sub-villages in the Kabembe Village. All of the householders and their wives belong to a group that requires contributions to a group fund. Each *nyumba kumi* manages more or less communal lands within the territory, which are occasionally distributed among the members.

About 60% of the 42 households of the sampled *nyumba kumi* group, many of which are occupied by young households, including eight single households, established their current gardens after the 1990s (Fig. 5). This figure suggests

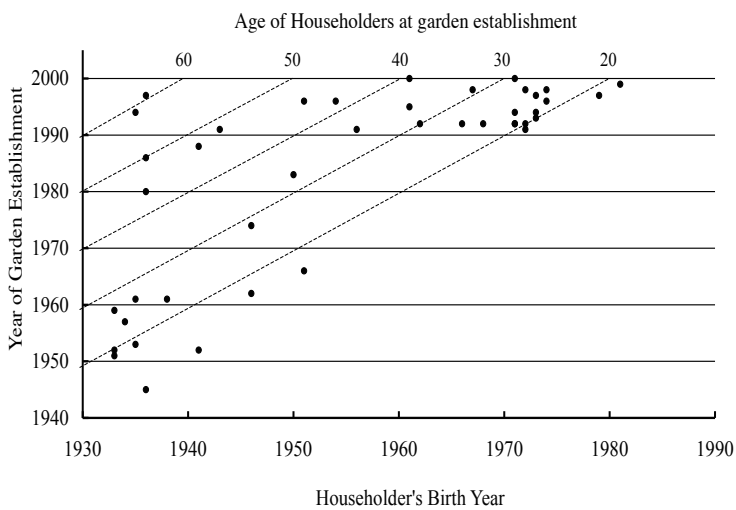

Fig. 5. Relationship between householder's age and the year of garden establishment

Fig. 6. Example of unused land in the research village

that rapid land fragmentation occurred due to population growth. However, older households are also distributed over a broad range. Although some have cultivated their gardens for decades, several other households established their gardens in their 1940s. Although no detailed information was obtained, at least six households had established their gardens recently, after they had moved from other places in the village. In most cases, the lands used to establish these new *kaaja* were probably acquired through the *nyumba kumi* system. These facts suggest that there are fewer limiting factors that restrain land distribution in Kabembe Village, as Kurita (1993) has argued in detail, based on the results of his survey of the Nyakyusa villages. This is in contrast to the Haya villages, where less land potential tends to be available, partly because of an increasing population (Maruo, 2002). Some unused lands have been observed in Kabembe (Fig. 6), even though land shortages exist in other villages in the Rungwe District (Mwamfupe, 1998).

II. Subsistence Activities

The crops cultivated in the research area are listed in Table 2. The most important crops, in addition to plantain, are maize (*Zea mays*), finger millet (*Eleusine coracana*), cassava (*Manihot esculenta*), and sweet potato (*Ipomoea batatas*). All of these food crops except plantain are generally grown in fields (*ngunda* or *kyalo*). However, some tree crops are grown as cash crops in *kaaja* gardens, including coffee (*Coffea arabica*), cacao (*Theobroma cacao*), and tea (*Camellia sinensis*). Cardamom (*Elettaria cardamomum*) is also a popular cash crop. The farm size by household was examined by obtaining one sample. The head of this household, born in the early 1930s, was provided with approximately 1 ha of garden land by the village chief in 1951. However, he only began to develop the garden in 1988, because until then he was employed as a government worker in Mbeya. He has planted and still cultivates 15 local banana varieties, including five plantain cultivars. In addition to the garden, he manages two other field plots of annual crops, with about 1.4 ha of maize and bean and about 0.8 ha of finger millet, according to his estimation. The average field size per household was reported to be 2.51 ha (excluding fallow area)

Table 2. Major crops in the research area

Common Name	The Nyakyusa Name	Scientific Name	Use
* plantain/ banana	*kijenja*	*Musa* spp.	staple food, beer, fruits, sale, materials
* taro	*isimbi*	*Colocasia esculenta*	staple food
cassava	*ijabu*	*Manihot esculenta*	staple food
sweet potato	*imbatata*	*Ipomoea batatas*	staple food
Irish potato	*ndofanya*	*Solanum tuberosum*	staple food
maize	*kirombe*	*Zea mays*	staple food, beer
finger millet	*ilesi*	*Eleusine coracana*	staple food, beer, fermenting ingredient
sorghum	*ontama*	*Sorghum bicolor*	staple food
rice	*mpunga*	*Oriza sativa*	staple food
common bean	*lulima*	*Phaselous vulgaris*	food
pigeon pea	*omubange*	*Cajanus cajan*	food
Bambara groundnut	*injugu*	*Voandzeia subterranea*	food
groundnut	*iishabala*	*Arachis hypogaea*	food
* pumpkin	*ilyanungu*	*Cucurbita* sp.	food
* sugarcane	*omuuba*	*Saccharum officinarum*	food
* African spinach	?	*Amaranthus* spp.	food
* okra	?	*Abelmoschus esculentus*	food
* African eggplant	?	*Solanum macrocarpon*	food
* tomato	*inyanya*	*Lycopersicon esculentum*	food, sale
* papaya	*ipapajwa*	*Carica papaya*	fruits
* mango	*yembe*	*Mangirefa indica*	fruits
* orange	*baluki*	*Citrus* sp.	fruits
* lemon	*ilalangi*	*Citrus limon*	fruits
* avocado	*kasokela*	*Persea americana*	fruits
* African oil palm	*yese*	*Elaeis guineensis*	fruits
* tea	*chai*	*Camellia sinensis*	sale
* coffee	*kahawa*	*Coffea arabica*	sale
* cacao	*kakao*	*Thobroma cacao*	sale
* cardamon	*iliki*	*Elettaria cardamomum*	sale

* Cultivated largely in *kaaja* (home garden).

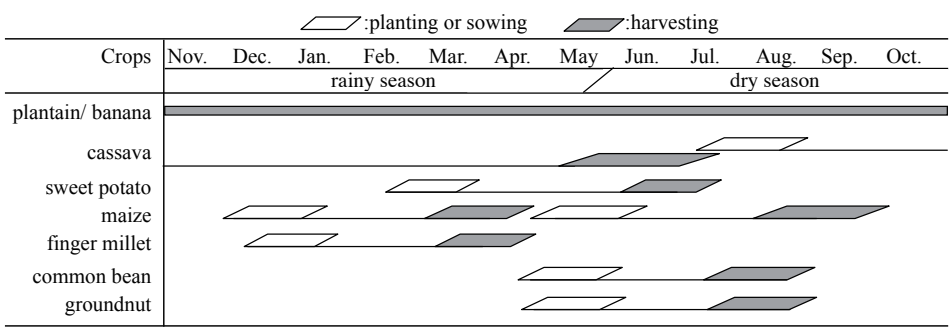

Fig. 7. Agricultural calendar of major crops

(Kurita, 1993). Generally, the Nyakyusa men are responsible for the entire management of cash and starch crops, and the women manage other food crops, including legumes and vegetables. As shown in Fig. 7 maize and finger millet are cultivated during the same period (December to March), and maize is also double-cropped in the same year. The farmers begin land preparation during the dry season of September to October by cutting the dry grass in the field, which is followed by burning the straw. The land is left unused until the rain arrives in December. The midland farmers usually make ridges for maize, but not for finger millet. Just before sowing, the soil surface, with the ashes, is leveled using an indigenous long-handled hoe called the *ikumbulu*. This tool is also utilized to cultivate the field, to plant banana suckers, and to weed.

Animal husbandry occurs on a small scale only in Kabembe Village. Out of the 42 households belonging to a *nyumba kumi* group, 24 raise no livestock. Except for chickens, pigs are the most popular livestock, kept by 16 households, followed by cows (11) and goats (5) (Table 3). The average number of each animal raised per household is 1.8 heads of pigs, 3.0 of cows, and 2.2 of goats. Fig. 8 shows the relationship between the householders' generation and the scale of raising livestock. A slight negative tendency can be found, with more animals found in older households.

Table 3. Livestock keeping among the 42 households

	Pig	Cow	Goat
Livestock Keeping Households	16	11	5
Rate of Livestock Keeping Households (%)	38.1	26.2	11.9
Average Heads per Household	1.8	3.0	2.2

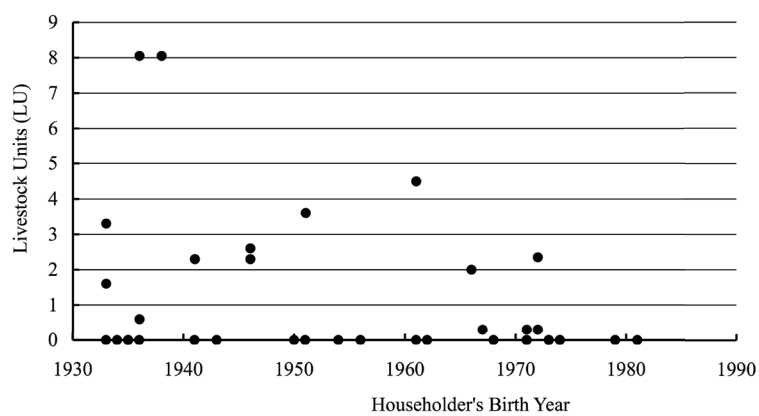

Fig. 8. Livestock keeping by birth year of householders
* Livestock unit (LU) is a unit based on the fodder requirement of animals, used to compare number of animals of different species or categories. One head of cow, pig and goat are equivalent to 1.0, 0.3 and 0.15, respectively.

PLANTAIN-BASED HOME GARDEN

I. Plantain Management

Kaaja is a mixed home garden consisting of cash crops such as plantain, banana, coffee, and cacao, and the consumption crops of African oil palm (*Elaeis guineensis*), taro (*Colocasia esculenta*), sugar cane (*Saccharum officinarum*), and pumpkin (*Cucurbita* sp.) (Fig. 9). Plantain and banana are clearly the dominant crops. The *kaaja* is the only type of farm where the Nyakyusa cultivate these culturally and economically important crops.

Plantain and banana can bear fruit year-round, an important factor in home-garden farming. However, the harvest fluctuates over the year, a phenomenon known as seasonality. According to the farmers, the highest production occurs from January to April during the rainy season, and the lowest occurs from May to November. Both the bunch size and the harvest frequency are higher in the abundant season. Due to this seasonality, the Nyakyusa once favored plantain hard porridge, especially during the dry season when food was scarce.

The Nyakyusa have developed specific agronomic skills for plantain management. First, they remove excess leaves and the outer sheaths of the pseudostems occasionally, to refresh the garden as well as prevent pest attack. The second common practice is debudding, which triggers early maturation or increased numbers of fruits, as is widely observed in other banana-growing areas. The Nyakyusa cut the male buds of all varieties after the emergence of the inflorescence. Third, it is considered important to apply organic matter or ashes to the crop. The application of cow dung is common among cattle owners, with some using dried dung, and others preferring to apply manure around each stool. Ash is also used as a fertilizer. The Haya farmers in the Kagera Region also utilize ash, but only for plantain varieties (AAB), whereas the Nyakyusa apply ash to all varieties.

However, the Nyakyusa are generally unfamiliar with desuckering and prop-

Fig. 9. Plantain stands mix-cropped with coffee

ping, which are common practices among the Haya (Maruo, 2002). Only a few Nyakyusa farmers remove surplus suckers from plantain (AAB) and some banana varieties. Other types of bananas, especially those with the ABB genome, are cared for minimally, sometimes resulting in dense banana stands in the villages. Propping is not a common practice in the research area. As a large herbaceous crop with a shallow root system, the pseudostem of the banana plant requires support with a pole until the harvest. However, the Nyakyusa farmers prop only some of the stands, primarily those of some plantain varieties.

II. Local Varieties and Home Garden Farming

In total, 23 local varieties of bananas and plantains were observed in the village survey (Table 4). This is fewer than in the areas of the Haya, who have developed over 70 local varieties. This suggests that the Nyakyusa have interacted with the crop for less time. By genome type, the varieties used by the Nyakyusa are one acuminata diploid (AA), seven acuminata triploids (AAA), nine hybrid triploids (AAB, plantain), one hybrid diploid (AB), and five hybrid triploids (ABB). This composition differs from that of the Haya, who cultivate more acuminata triploid varieties and fewer hybrid triploid varieties. The usage of the varieties by the Nyakyusa, by genome type, is also different from that of the Haya. The Haya use most of the AAA varieties exclusively for cooking, as their staple, or for brewing, but the Nyakyusa mainly use these varieties for dessert and for cooking. All of the Nyakyusa varieties, including dessert and brewing bananas, can be consumed after boiling, while in the case of the Haya only the cooking banana varieties are exclusively boiled. Such differences show that the Nyakyusa do not recognize the specific purpose of each variety. Some varieties, such as the plantain variety *mbundya* (AAB) and the dessert banana *mwamnyila* (AAA), have two color forms in the stem or fruit, but the Nyakyusa do not use this characteristic to distinguish the varieties.

Two home gardens were measured, a rather small one of 0.25 ha, and another of 1.03 ha. The household head of the first, born in 1941, is a schoolteacher who moved to the village around the time of 1960. After acquiring the land from the *nyumba kumi t*o which he belonged, he developed the smaller garden from bush-like land into plantain-based gardens. A total of 13 local varieties are currently cultivated in the garden, with five varieties each of the AAA or AAB (plantain) genome types. The garden contains 143 banana mats, resulting in an average planting density of 572 mats/ha. However, the substantial density should be considered much higher since, by observation, about one-third of the land in the surveyed garden was not used for cultivation. This is not a unique case, as uncultivated land is often a feature of the Nyakyusa home garden. Compared with other home gardens like those of the Haya, the Nyakyusa gardens often have larger spaces for habitation, which include houses, huts, and cleaned earthen courtyards (*lubingilo*). There is little information on the functional meaning of these spaces, except that houses are built for each wife, sur-

Table 4. Local plantain/banana varieties of the Nyakyusa

No.	The Nyakyusa Name	Genome Type	Frequency*	Frequency* of Use					
				Raw	Beverage	Roasted	Boiled	Fried	Others
1	*ndyali*	AA?	2	1	3	2	1	2	3
2	*jamaika*	AAA?	4	2	3	2	1	3	3
3 -1	*mwamunyila*	AAA	3	1	3	2	2	3	3
3 -2	*mwamunyila* (green-red)	AAA	2	1	3	3	2	3	3
4	*mtwika*	AAA	2	1	3	3	1	3	3
5	*kaluma*	AAA	3	1	3	3	2	3	3
6	*buganda*	AAA	2	2	3	2	1	3	3
7	*siilya*	AAA	2	1	3	2	1	3	3
8	*sasala*	AAA	3	1	3	2	1	3	3
9	*ngego*	AAB-Horn	2	2	3	1	1	1	3
10	*kapale*	AAB-French	3	2	3	2	1	2	2
11	*mbundya*	AAB-French	4	3	3	1	1	1	2
12 -1	*mwandilile*	AAB-French	4	2	3	1	1	1	2
12 -2	*mwandilile* (green-red)	AAB-French	4	3	3	2	1	1	2
13	*mwandumbya*	AAB-French	2	3	3	1	1	1	2
14 -1	*ndondwa*	AAB-French	4	2	3	1	1	2	2
14 -2	*ndondwa* (red stem)	AAB-French	4	3	3	2	1	2	2
15 -1	*ngongobe*	AAB-French	2	3	3	1	1	1	2
15 -2	*ngongobe* (green-red)	AAB-French	3	3	3	1	1	1	2
16	*sege*	AAB-French	1	2	3	1	1	1	1
17	*sogoso*	AAB-French	3	2	3	1	1	1	1
18	*kambani*	AB	1	1	2	3	2	3	3
19	*gulutu*	ABB	1	2	2	2	1	2	2
20 -1	*halale*	ABB	2	3	2	1	1	2	2
20 -2	*halale* (black stem)	ABB	4	2	2	2	1	2	2
21	*halale kibuluko*	ABB	4	3	2	1	1	2	2
22	*halale bukoba*	ABB	3	1	3	2	1	2	2
23	*halale ipyana*	ABB	4	3	2	2	1	2	2

* 1: very common, 2: common, 3: rare, 4: very rare

rounding a courtyard, in the polygamous Nyakyusa society (Wilson, 1938). The courtyard plays a role as the communal space for the household.

The substantial planting density can be estimated from Fig. 10. The figure shows a quadrate sample of a *kaaja* of another household. The garden size was measured as 1.03 ha, including small regions of bushy unused land. Eleven plantain mats and three banana mats were counted in the 100-m^2 quadrate. The planting density of 1,400 mats/ha is higher than that of the Haya, of about 1,100 mats/ha (Maruo, 2002). However, this planting density seems reasonable since plantains are likely to need less space than highland bananas, due in part to their less vigorous leaf development.

The survey revealed that the Nyakyusa prefer to cultivate a certain vari-

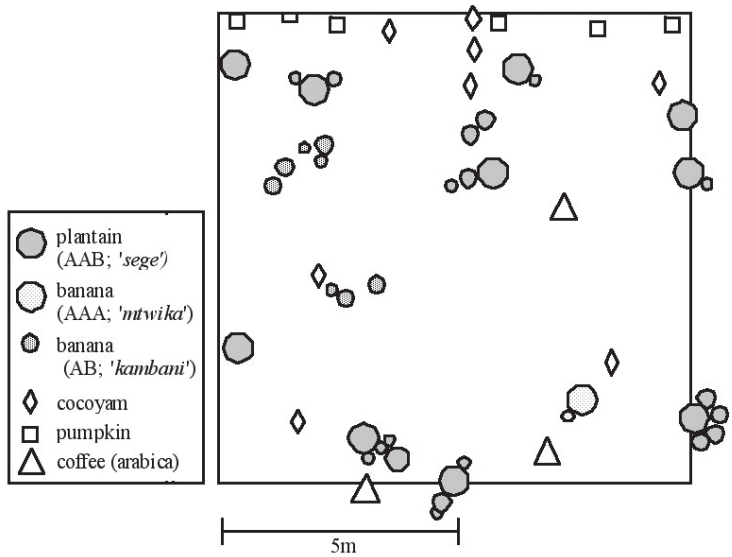

Fig. 10. A quadrate of *a kaaja* cared by a Nyakyusa household (10 m × 10 m)

Table 5. Composition of banana varieties in a sample home garden

	Local Variety	Genome Type	No. of Mats	%	Use*
1	*ndyali*	AA	5	3.5	(4) (1)
		Sub-total	5	3.5	
2	*buganda*	AAA	24	16.8	(1) (4)
3	*mtwika*	AAA	8	5.6	(4) (1)
4	*sasala*	AAA	2	1.4	(1) (4)
5	*siilya*	AAA	1	0.7	(1) (4)
6	*mwamunyila*	AAA	1	0.7	(4) (1)
		Sub-total	36	25.2	
7	*sege*	AAB	74	51.7	(1) (2)
8	*ngongobe*	AAB	8	5.6	(1) (2)
9	*sogoso*	AAB	5	3.5	(1) (2)
10	*mwandumbya*	AAB	1	0.7	(1) (2)
11	*ngego*	AAB	1	0.7	(1) (2)
		Sub-total	88	61.5	
12	*kambani*	AB	6	4.2	(4) (1) (3)
		Sub-total	6	4.2	
13	*gulutu*	AAB	7	4.9	(4) (1) (3)
		Sub-total	7	4.9	
		Total	143	100.0	

* (1)= boiled, (2)= fried, (3)=beverage, (4)=eaten raw

Fig. 11. The most important plantain variety of the Nyakyusa, called '*sege*'

ety (Table 5). Over half of the banana mats in one garden were occupied by one plantain cultivar, '*sege*' (Fig. 11), and this feature is probably a general tendency in the village. Such varietal deviation is also found with the Baka pygmies in eastern Cameroon, who cultivate plantain with extensive care (Kitanishi, 2003). The quadrate survey also supports the importance of '*sege*,' which occupies 11 mats of the 14 in a 100-m^2 unit (Fig. 10). The household head preferred the taste of this cultivar. According to some elders, '*sege*' is the first and therefore oldest variety used by the Nyakyusa, and was once frequently consumed in the form of hard porridge. This variety seems to be favored by the people because of its early maturity and pleasant taste.

Because plantain and banana have become marketable crops over the last few decades, the Nyakyusa take them to the neighboring district Kyela, the regional capital Mbeya, and even to remote cities such as Iringa and Dar es Salaam. According to the farmers, there are significant marketability differences among the varieties. Plantains are usually marketable, although the price depends on the bunch size and the season. The varieties '*sege*,' '*kapale*,' and '*sogoso*' command higher prices, with bunch prices of 800–1,500 Tsh (1 US$=900 Tsh in August 2000). Some dessert bananas (AAA) have recently become marketable, whereas other varieties are generally unmarketable or sold only within the village at a lower price. Although there are fewer buyers from outside the village than there were in the late 1990s, plantain is still a popular cash resource.

SOCIO-HISTORICAL ASPECTS OF PLANTAIN/BANANA CULTURE

Rossel (1998) indicated from linguistic evidence that the Nyakyusa adopted plantain at a relatively late date, and that this was partly due to their isolated geographical position. The general term for plantain in the Nyakyusa language,

itooki (pl. *matooki*), is derived from '*-tooke,*' which refers to highland bananas (AAA) from northwestern Tanzania. Other names for the traditional banana varieties of the Nyakyusa are probably related to names used in other regions, including Rwanda and Burundi (Rossel, 1998). Despite such evidence, plantain varieties were certainly one of the first bananas in the area, and have been cultivated for more than 100 years. Etymological explanations for the local names were obtained for only a few varieties through the survey. Several plantain varieties may have already existed in the region in the late 17th century, when the first settlers arrived. In contrast, some of the banana varieties can be traced to recent introductions. For example, oral tradition tells that a Nyakyusa man introduced the banana variety '*gulutu*' (ABB) from a forest area in the present Zambia in about 1930. Another ABB variety, '*halale*,' which was probably named after the present capital city of Zimbabwe, is believed to have been grown before the introduction of '*gulutu*.' '*Halale*,' adopted by the Nyakyusa around 1900, might have been introduced by European missionaries (Rossel, 1998). The only diploid variety of *'kambani*' (AB) is said to have been brought to Itete in the mid-1940s. These historical explanations of varieties of the AB or ABB genotypes correspond with those of the Haya, who never cultivated these types of bananas until the mid-20th century. These facts strongly suggest that, in early times, highland people in Tanzania encountered only highland bananas (AAA) and plantain (AAB).

The Nyakyusa vocabulary for plantain and banana parts is rich (Table 6), although less rich than that of the Haya (Maruo, 2002). The Nyakyusa have specific words for at least five plantain parts, including the corm, leaf, and the cluster of the bunch, indicating that they have distinguished the crop from other plant species for some time. Characteristically, the Nyakyusa have specific terms for ripe fruits, which, in addition, are different for plantain (*ifufu*) and banana (*ibifu*). This unique feature is probably related to their oral history and to the

Table 6. The Nyakyusa vocabularies on plantain/banana

English Name	The Nyakyusa Name
whole banana plant	*ikijenja /ifi-*
corm	*indende*
leaf or leaf blade	*ulufungogo*
bract	*ilyububu /ama-*
male bud	*ingungwe*
hand (cluster)	*kipambo*
generic term for cooking banana	*mbaraga*
generic term for plantain	*iitooki /ama-*
ripen plantain fruit	*iifufu /ama-*
ripen banana fruit	*iibifu /ama-*

* The list shows vocabularies used exclusively for plantain/banana plants.

fact that they once lived on raw plantains and bananas; moreover, the foundation of their culture is the plantain.

Another unique use of banana by the Nyakyusa further demonstrates their familiarity with the crop (Table 7); the women weave mats called *bulili, luteefu*, and *ipuku* from banana fiber. *Bulili* is a large mat of about 1.5 × 3 m made from dried leaf petioles (Fig. 12), whereas *luteefu* is a smaller mat of about 1 × 1.5 m that is mainly woven from dried sheaths. A well-made *bulili* is said to last almost six years, and is generally more durable than a *luteefu*, which is replaced about every three years. The difference between those two mats and the *ipuku* is in the fineness of the stitches; the *ipuku* is coarsely woven from dried petioles or sheaths, and so it can be made more quickly. The Nyakyusa favor the fibers of '*halale*' (ABB) to make these mats, since the variety is said to have more durable petioles (fibers) than the others. However, the fibers of '*gulutu*' (ABB) and '*kambani*' (AB) have also been utilized recently, due to a decrease in '*halale*' cultivation owing to its sensitivity to a pest. The elders told that these banana-fiber mats have been made by the Nyakyusa for over 100 years. This suggests that, originally, only plantain (AAB) fiber was used for mat-making, since '*halale*' is said to have been introduced about 100 years ago.

Wilson (1959) pointed out some of the social aspects of plantain and banana in the Nyakyusa paternal society. In one episode during the chiefdom period, a chief sent a man to all of the villages of his chiefdom to announce that cutting bunches and even leaves of young banana plants was prohibited, and that other foods such as sweet potatoes, beans, and cowpeas should be eaten. The aim of

Table 7. Plantain/banana utilization by the Nyakyusa

Use	The Nyakyusa Name	Category*	Parts Utilized	Frequency**
banana stew with beans	*mbalaga* (*n'endima*)	C	fruits	1
hard porridge	*bunyangwa bwa matooki*	C	fruits	3
fried banana	*matooki*	C	fruits	1
fried banana cake	*fitumbula*	C	fruits	2
banana beer	*mbege*	C	fruits	3
banana beer	*kindondwa*	C	fruits	4
snuff mixed with extracts of banana peels	*ngambo ja mwombulo*	M	peels	2
head cushion	*ngata*	M	sheaths	2
large-size mat	*bulili* (or *bulili nkwela*)	M	dried petioles	1
small-size mat	*luteefu*	M	dried sheaths or dried petioles	1
roughly-weaven mat	*ipuku*	M	dried sheaths or dried petioles	1
covering	?	M	leaves	2
roof thatching	?	M	leaves	2
feeding for cattle	?	O	any parts	2

* C: consumption, M: material culture, O: others

** 1: very common, 2: common, 3: rare, 4: very rare

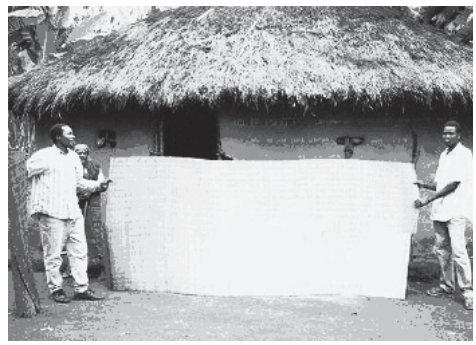

Fig. 12. Traditional Nyakyusa mat made from banana fiber

the chief was that bananas would then flourish in all homesteads, making the country appear rich and productive. This case indicates that banana was a symbol of the prosperity for the community. The crop also mediates the gender values of the people. For example, in the rain-making ritual of the Nyakyusa, plantain symbolized man and sweet banana symbolized woman (Wilson, 1959: 32). As mentioned above, plantain has a more important role for the Nyakyusa than other bananas. This representation of gender value is probably due to the paternalistic society of the Nyakyusa. According to Rossel (1998), every clan and almost every household has a sacred banana (plantain) plant or grove for ceremonies in which the clan head prays to the ancestors. The plant or grove is never cut down and its fruits are not eaten by women, since they believe the spirits of their ancestral fathers reside within. Plantain has historically been significant for the Nyakyusa not only as a food resource but also as a socio-cultural resource.

CONCLUSIONS

The Nyakyusa have had a close relationship with banana and plantain for hundreds of years. According to De Langhe et al. (1994), plantain was probably introduced into East Africa several millennia before other bananas. Nevertheless, the Nyakyusa are the only group in East Africa to have developed a plantain-based culture. Compared with other plantain growers in Central Africa, their approach to the plants also differs in terms of the use of home gardens, although the initial process of plantain farming is not discussed in this paper. The home-garden farming style creates a miniature forest for each family unit, requiring more intensive care than forest farming.

This study has revealed several aspects of the plantain-based farming of the Nyakyusa and its significance in a cultural context by comparison with the Haya banana growers of northwestern Tanzania. Neither the agronomic skills of the Nyakyusa nor the numbers of local varieties exceed those of the Haya. However, the Nyakyusa use specific practices with different varieties, and attach

much importance to the plantain variety '*sege*.' Some differences in the management practices of the Nyakyusa and the Haya may be attributable to the different types of banana that are cultivated, as well as to their respective environments, a factor that favors the Nyakyusa, who experience mild weather and better soils. Another distinction may be identified with respect to the cultural values attributed to these plants by the two peoples. As mentioned above, the Nyakyusa have not only developed cultivation skills, tools, vocabularies, and varietal diversity in this respect but they have also attributed symbolic meanings to these plants, meanings that are related to prosperity, the idea of the sacred, and gender, a feature that has seldom been observed in the Haya. Such symbolization probably works as a social tool to protect a unique crop, in that multiple meanings are associated with it. In other words, plantain probably played a key role in consolidating the development of the Nyakyusa rural community.

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